AMENDMENT TO THE CLAIMS

Claims 1-14. (Canceled)

Claim 15. (Original) A method for manufacturing a light-emitting semiconductor device of Group III nitride compound semiconductor with p-type conduction, said method comprising:

providing a surface layer;

forming a multi-layered electrode layer comprising a first electrode layer formed on said surface layer and a second electrode layer formed on said first electrode layer, said first electrode layer comprising a material having ionization potential lower than that of said second electrode layer and said second electrode layer comprising a material having an ohmic characteristic to said semiconductor better than that of said first electrode layer;

forming an electrode pad covering a portion of said second electrode layer and leaving another portion of said second electrode layer uncovered; and

providing a heat treatment so that the portion of said material of said second electrode layer which is uncovered by said electrode pad is distributed more deeply into said surface layer than that of said first electrode layer and provides a contact resistance between said electrode layer and said surface layer lower than said portion covered with said electrode pad.

Claim 16. (Original) A method according to claim 15, wherein said material of said first electrode layer includes at least one of nickel (Ni), iron (Fe), copper (Cu), chromium (Cr), tantalum (Ta), vanadium (V), manganese (Mn), aluminum (Al), and silver (Ag) and said material of said second electrode layer includes at least one of palladium (Pd), gold (Au), iridium (Ir), and platinum (Pt).

Claim 17. (Original) A method according to claim 15, wherein said material of said first electrode layer is nickel (Ni) and said material of said second electrode layer is gold (Au).

Claim 18. (Original) A method according to claim 15, wherein said heat treatment is carried out in the range from about 400°C to 700°C.

Claim 19. (Original) A method according to claim 15, wherein said Group III nitride compound semiconductor satisfies the formula $Al_xGa_yIn_{1-x-y}N$, wherein $0 \leq x \leq 1$, $0 \leq y \leq 1$, and $0 \leq x+y \leq 1$.

Claim 20. (New) A method according to claim 15, wherein materials of said second electrode layer do not permeate into said first electrode layer immediately under said electrode pad, which enables the interface between said electrode and said semiconductor immediately under said electrode pad to have a predetermined large resistivity and not to have an electric current pass therethrough.

Claim 21. (New) A method according to claim 15, comprises:

forming a first metal layer on said surface layer, forming a second metal layer on said first metal layer, and forming a third metal layer on said second metal layer;

said method further comprising:

forming a protective film over said third metal layer, said protective film leaving exposed a central portion of said third metal layer;

wherein said second metal layer comprises gold (Au), said first metal layer comprises a material that has an ionization potential lower than gold (Au), and said third metal layer comprises a material that has an adhesiveness to said protection film which is stronger than gold (Au).

Claim 22. (New) A method according to claim 15, wherein said material of said first metal layer includes at least one of nickel (Ni), iron (Fe), copper (Cu), chromium (Cr), tantalum (Ta), vanadium (V), manganese (Mn), aluminum (Al), and silver (Ag).

Claim 23. (New) A method according to claim 15, wherein said material of said third metal layer includes at least one of aluminum (Al), nickel (Ni), and titanium (Ti).

Claim 24. (New) A method according to claim 15, wherein said protective film comprises silicon oxide (SiO_2).

Claim 25. (New) A method according to claim 15, wherein said material of said first metal layer comprises nickel (Ni) and said material of said third metal layer comprises aluminum (Al).

Claim 26. (New) A method according to claim 15, wherein said heat treatment is carried out in an atmosphere comprising oxide (O_2).